

# The Context for Choice: Health Implications of Targeted Food and Beverage Marketing to African Americans

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Targeted marketing of high-calorie foods and beverages to ethnic minority populations, relative to more healthful foods, may contribute to ethnic disparities in obesity and other diet-related chronic conditions. We conducted a systematic review of studies published in June 1992 through 2006 (n=20) that permitted comparison of food and beverage marketing to African Americans versus Whites and others. Eight studies reported on product promotions, 11 on retail food outlet locations, and 3 on food prices. Although the evidence base has limitations, studies indicated that African Americans are consistently exposed to food promotion and distribution patterns with relatively greater potential adverse health effects than are Whites. The limited evidence on price disparities was inconclusive. (*Am J Public Health*. 2008;98:1616–1629. doi:10.2105/AJPH.2007.115626)

Food-marketing strategies that encourage excess consumption of food or discourage physical activity may contribute to environments that predispose people to gain weight.<sup>1–5</sup> Increased availability of “junk food,” increased portion sizes, food advertising, fast-food promotion, and the relatively low cost of high-fat, high-calorie foods are linked to the obesity epidemic and are each based on a marketing activity.<sup>5–9</sup> An Institute of Medicine committee reviewed evidence regarding the influence of marketing on the diet and health of US children and concluded that

food and beverage marketing influences the preferences and purchase requests of children, influences consumption at least in the short term, likely contributes to less-healthful diets, and may contribute to negative diet-related health outcomes and risk among children and youth.<sup>10(pES-6)</sup>

Such attributions increasingly implicate marketing as a major contributor to the obesity epidemic and result in calls for interventions such as regulating advertising, subsidizing healthful foods, changing corporate practices, and taxes on unhealthy foods.<sup>1,11,12</sup> However, the policy issues are complex. Policymakers take a neutral stance toward product choice, requiring only that the settings within which consumption choices are made must be fair and not deceptive.<sup>13</sup> Precedent exists for limiting marketing of products considered harmful to health.<sup>14</sup>

Our review summarizes the available evidence about the food and beverage marketing environments of African Americans. We define “food environment” as the totality of influences on how people acquire, choose, and consume foods and beverages, and conceptualize marketing as a distinct characteristic of this environmental context. The marketing environment involves 4 key tools used by food marketers to reach a particular target market and to which consumers are exposed: products, promotions, place (access and distribution), and price.<sup>13,15</sup> These 4 elements are known as the “marketing mix,” and our conceptualization considers marketing as a system of practice that results in specific exposure outcomes for consumers. Given that food-marketing practices are typically targeted to particular consumer segments, we attempted to determine whether such targeting to African Americans potentially contributes to adverse health outcomes. The topic relates to ethnic minority populations more broadly<sup>16</sup> but is explored here with African Americans as a case example.

Adverse effects of target marketing have been discussed extensively in relation to tobacco and alcohol marketing.<sup>17–19</sup> Links between marketing practices and African American–White health disparities with respect to obesity and other diet-related chronic diseases have been noted.<sup>15,20</sup> The prevalence of obesity in African American children and adults is substantially higher than in Whites,

particularly among girls and women.<sup>21</sup> Diabetes, cardiovascular diseases, and certain cancers are related to obesity and to dietary factors that affect African Americans disproportionately<sup>16</sup> and are independent of caloric intake.<sup>22</sup> Recommendations to prevent or control these conditions emphasize limiting consumption of foods and beverages that are high in calories, saturated fat, and salt, and increasing consumption of protective foods such as fruits and vegetables, whole grain breads and cereals, and low fat dairy products.<sup>23</sup> Dietary patterns of African Americans are notably less favorable than those of Whites in this respect.<sup>24</sup> This disparity in dietary quality has persisted over time,<sup>25</sup> as has the disparity with respect to obesity,<sup>21</sup> raising the question of whether food-marketing practices are among the environmental variables perpetuating these disparities.

## BACKGROUND

### Targeted Marketing

Marketing activities create perceptions of value among consumers to prompt voluntary exchanges such as product purchases. The marketing process involves analyzing marketing opportunities, developing strategies, planning programs, and managing marketing efforts.<sup>26</sup> *Products* offered to a market to satisfy a want or a need include tangible goods, services and ideas.<sup>27</sup> *Promotion* includes advertising and other types of persuasive communications that convey product benefits, pricing strategies, and availability (e.g., sales promotions, direct mail, promotional Web sites, public relations, free food samples, special events, and product placement). *Place* refers to the distribution of the product, including how products are made accessible to target consumers and the quality and convenience of the available products. *Price* refers to the cost that is exchanged for the product, in absolute terms and relative to alternatives.

Marketing as a formal process has existed for over 100 years. The target-marketing process (segmentation, targeting, and positioning) apparently began in the late 1920s with research indicating that men and women read different parts of the newspaper<sup>28</sup> and is now viewed as the essence of modern marketing.<sup>27</sup> Using target marketing, different consumer segments may be exposed to different food and beverage products, promotions, and prices. Because it is not feasible for marketers to address consumer preferences individually, they segment populations into subgroups based on characteristics (e.g., usage behavior, needs, wants, lifestyles, behavior, values) that make them likely to respond similarly to marketing efforts. These groups can be defined by demographics (e.g., age, race/ethnicity, gender), consumer behavior (e.g., light vs heavy product users), psychographics (e.g., lifestyle, personality characteristics), geographic location (e.g., neighborhood, region), or other variables relevant to the marketed product.

Products are positioned to 1 or more target markets in ways that provide companies with a sustainable competitive advantage relative to alternative products. Overconsuming high-calorie foods may be facilitated by exposure to a marketing mix that renders overconsumption normative—e.g., access to a limited variety of food stores and restaurants in which high-calorie foods are predominant or heavily promoted combined with promotions for different or larger package sizes or food portions. This marketing environment may override other, much less pervasive health promotion efforts such as promoting healthful eating.

### Targeted Marketing and African Americans

Targeted marketing efforts to African Americans began in earnest with the civil rights movement, although some companies, such as soft drink companies, have had “special markets” departments since the 1930s.<sup>29,30</sup> A 1967 article on grocery manufacturing promoted “the changing Negro market,” based on its rapidly growing youth population and urban density.<sup>31(pp49–50)</sup> Food and beverage companies competed heavily for market share among African American consumers through advertising, merchandising, public relations, community involvement, and employment opportunities. The 1967 article

also noted the effectiveness of Negro media and Negro celebrities as methods to reach this emerging market, foreshadowing now-standard industry approaches.

Entrepreneurial African American professionals made corporate America aware of the buying power of African Americans, often in conjunction with a drive for employment opportunities,<sup>31</sup> and there is now a large industry of African American marketing consultants and advertising agencies. The overall buying power of African Americans is substantial, projected to rise from \$761 billion in 2005 to \$1.1 trillion in 2011, accounting for 61% of combined ethnic-minority spending.<sup>32</sup> African Americans shop for food more often and, on average, spend more money on food per shopping occasion compared with the population as a whole.<sup>33</sup> Minority ethnic populations as a whole currently represent 31% of the overall US population but are responsible for 37% of all supermarket sales, generating more than \$51.5 billion in sales on an annual basis.<sup>34</sup>

Socioeconomic trends, demographic growth, and reassertion of ethnic identity in the last 20 years have led to an increase in racial and ethnic target marketing.<sup>29,35</sup> Family characteristics and income differ among African Americans and Whites, and these variables influence consumer behavior: African Americans are less likely than are Whites to be married,<sup>36</sup> and African American households are about 4 times more likely than are White households to be headed by women with children.<sup>37</sup> Household incomes of African Americans are lower than those of Whites by more than one third, and relatively more African Americans are poor.<sup>38</sup> Low income heightens sensitivity to the cost of basic goods and services, including food, and the lowest cost foods in the US food supply are relatively higher in fat and sugar.<sup>39</sup>

African American consumers also use more and different media compared with Whites.<sup>40,41</sup> These differences provide effective channels for targeting African American and may result in an overall greater exposure to marketing. In addition, African Americans are more likely than are any other US ethnic group to live in racially segregated neighborhoods, even when suburban neighborhoods are included,<sup>42</sup> which facilitates geographic

targeting. Moreover, the social and psychological meanings of African American identity may enhance the effectiveness of targeted marketing. African American identity emanates from the ability to recognize and be recognized as African Americans on the basis of physical characteristics, shared cultural perspectives that relate in part to the collective history of slavery, and past and current experiences of racial discrimination and their derivatives.<sup>43,44</sup> Experimental research suggests that members of ethnic groups or other social groups that are distinctive and socially disadvantaged, such as African American consumers, respond more favorably to targeted advertising compared with White consumers.<sup>35,45</sup> In addition, the tendency toward high brand and product loyalty among African Americans<sup>44</sup> enhances potential marketer benefits of targeted marketing.

The total marketing exposure of African Americans includes advertising directed at the general public. That is, African Americans also respond to general advertising, although not necessarily in the same ways that Whites or other groups might respond.<sup>34,46</sup> Marketing oriented to African Americans may shape the opinions of others about African Americans (i.e., cause Whites to associate African Americans with certain types of products or behaviors).<sup>14,35</sup> These nontarget market issues may contribute to the overall marketing exposures of African Americans but are beyond the scope of this review.

## METHODS

### Analytic Framework

The general analytic framework was based on the previously described marketing mix, applied specifically to marketing targeted to African Americans. For example, evidence about targeted *products* might address the explicit customization of product features to African American tastes, such as specific flavors, packaging, or portion sizes. Evidence of targeted *promotions* might involve research findings regarding the relative amount, type, and nature of the messages and products directed specifically to African Americans, such as marketing via African American media or campaigns directed to African American neighborhoods. *Place* (i.e., distribution) would

be reflected in findings on the relative availability of food, location of food outlets, and the specific types of food available in restaurants or other retail food outlets in neighborhoods in which African Americans live, whereas *price* would encompass analyses of the relative cost of food products or price comparisons in predominantly African American neighborhoods.

### Search Strategy

Our research sought to identify empirical, published, peer-reviewed studies across diverse disciplines in which relative differences in product, promotion, distribution of food and beverage products, or costs to racially or ethnically African American consumers could be evaluated in comparison with the general market or to a White market. We determined that eligible articles would include data on one of the focal marketing variables (product, promotion, distribution, or costs) specific to food and beverage products, and would have referred specifically to “African American” or “Black” consumers. In addition, articles needed to include a comparison to the general market or to a White market, be published in the English language, and have been published from June 1992 through December 2006. The beginning date of June 1992 was chosen to coincide approximately with early reports of the US obesity epidemic. Studies that focused on consumer response (as opposed to a measure of marketing) or addressed African Americans in international contexts and studies of low-income communities that did not present data specific to African Americans were ineligible.

Search terms reflected the 3 key components of the research question: the population under study (African Americans), the products of interest (foods and beverages), and the source of marketing influence (outcomes of product, promotion, distribution, and price decisions). To maximize retrieval, the search strategy for each of these 3 components incorporated synonyms and closely related terms (e.g., both *African American* and *Black*; both *beverage* and *drink*; both *availability* and *location*). This process produced a list of 18 search terms and phrases. After finding that the individual search terms returned a significant amount of irrelevant articles, 2- and 3-way

combinations of terms were created. The final list consisted of 125 combinations of the population, product, and marketing terms in order to capture the broadest possible range of relevant articles. The 7 electronic databases identified as inclusive of the relevant literatures spanned disciplines including business, communications, economics, sociology, public health, public policy, and psychology: Business Source Premier, ABI/Inform, PubMed, Communication Abstracts, EconLit, Sociological Abstracts, and Social Science Research Network. Further, the 2 megadatabases, Business Source Premier and ABI/Inform, captured several other key databases including PsychInfo. Despite the potential for overlap, full searches were undertaken in all databases.

The search process identified a total of 5009 citations, of which 2304 were unique hits. We identified potentially relevant citations through a liberal screening of all 2304 abstracts. For example, articles for which African Americans or Blacks were mentioned in the abstract were examined in full text if they appeared to have information on an aspect of food or beverage marketing. In addition, articles that mentioned demographic variables related to food marketing were examined in full text to determine whether they presented any results for African Americans. We ultimately identified 21 articles that met all 3 eligibility criteria; 1 was later excluded upon detailed quality review because of a lack of an explicit comparison with a general or majority market.

We abstracted all articles that met the 3 key inclusion criteria. Our data extraction form prompted for key conceptual and methodological details including the study objective, marketing variable or variables assessed, type of study, time period covered by data, setting and context for racial comparisons, and study findings related to the analytic framework. Both authors read all included articles for identification and verification of study details.

To incorporate considerations of study quality, we adapted the key quality criteria used in the Institute of Medicine report on food marketing to children.<sup>10</sup> Our relevant criteria related to the ability to clearly document an association of African American race/ethnicity with marketing exposures

and, thus, did not include those related to establishing causal relations. We developed and applied a coding scheme in which ratings of low, medium, or high (scored as 1, 2, or 3, respectively) were assigned to each of 5 criteria that reflected the quality and specificity of the study methods as described in the articles, including the ability to separate race/ethnicity from socioeconomic status, the validity, reliability, and precision of the marketing measure or measures, and whether the data were nationally representative. The reporting of at least 1 statistical difference was a characteristic of all of the identified studies; hence, significance of findings was not included as a quality-grading criterion.

Summing over the 5 criteria, quality ratings of low, medium, and high were assigned to studies with overall scores of 5 to 8, 9 to 12, and 13 to 15, respectively. Findings of the 20 studies were summarized within and across elements of the marketing mix to gain an overall understanding of the food and beverage marketing environment of African Americans and related research needs.

## RESULTS

### Nature of the Evidence

Twenty eligible articles were identified, of which 11 were published in 2005 to 2006 (Table 1). Eight studies analyzed promotional messages and tactics.<sup>48,49,51,55,58–61</sup> Eleven were cross-sectional studies of food distribution that focused on outlet density and access and the types of products available.<sup>50,52–54,56,57,61–63,65,66</sup> Three were analyses of food prices.<sup>47,57,65</sup> Race as a segmentation variable was constructed primarily through the identification of African American media or neighborhoods. Studies varied in geographic scope, from a focus on particular census regions within a city to comparisons across all US zip codes or national media. Most studies were conducted by scholars from health-related (e.g., epidemiology, medicine, public health) or communication fields, and appeared primarily in communications and health journals (Table 1). Only 1 of the articles included a marketing scholar as an author,<sup>49</sup> and this was also the only article that appeared in a marketing or consumer research journal.

**TABLE 1—Characteristics of Studies Related to Environments in Which Food is Marketed to African Americans: 1995–2006**

	Studies (N = 20)
Year of publication	
1995–1999	Graddy <sup>47</sup> ; Pratt and Pratt <sup>48</sup>
2000–2004	Bang and Reece <sup>49</sup> ; Block et al. <sup>50</sup> ; Henderson and Baldasty <sup>51</sup> ; Morland et al. <sup>52</sup> ; Morland et al. <sup>53</sup> ; Sloane et al. <sup>54</sup> ; Tiroidkar and Jain <sup>55</sup>
2005–2006	Baker et al. <sup>56</sup> ; Block and Kouba <sup>57</sup> ; Duerksen et al. <sup>58</sup> ; Harrison <sup>59</sup> ; Henderson and Kelly <sup>60</sup> ; Lewis et al. <sup>61</sup> ; Moore et al. <sup>62</sup> ; Powell et al. <sup>63</sup> ; Sloane et al. <sup>64</sup> ; Small and McDermott <sup>65</sup> ; Zenk et al. <sup>66</sup>
Type of journal	
Health and medicine	Baker et al. <sup>56</sup> ; Block and Kouba <sup>57</sup> ; Block et al. <sup>50</sup> ; Duerksen et al. <sup>58</sup> ; Lewis et al. <sup>61</sup> ; Moore et al. <sup>62</sup> ; Morland et al. <sup>52</sup> ; Morland et al. <sup>53</sup> ; Sloane et al. <sup>54</sup> ; Sloane et al. <sup>64</sup> ; Tiroidkar and Jain <sup>55</sup> ; Zenk et al. <sup>66</sup>
Nutrition	Block and Kouba <sup>57</sup> ; Henderson and Kelly <sup>60</sup> ; Pratt and Pratt <sup>48</sup>
Communications	Harrison <sup>59</sup> ; Henderson and Baldasty <sup>51</sup>
Social policy	Small and McDermott <sup>65</sup>
Business economics	Graddy <sup>47</sup>
Marketing/consumer	Bang and Reece <sup>49</sup>
Marketing domain <sup>a</sup>	
Promotion	Bang and Reece <sup>49</sup> ; Duerksen et al. <sup>58</sup> ; Harrison <sup>59</sup> ; Henderson and Baldasty <sup>51</sup> ; Henderson and Kelly <sup>60</sup> ; Lewis et al. <sup>61</sup> ; Pratt and Pratt <sup>48</sup> ; Tiroidkar and Jain <sup>55</sup>
Place	Baker et al. <sup>56</sup> ; Block and Kouba <sup>57</sup> ; Block et al. <sup>50</sup> ; Lewis et al. <sup>61</sup> ; Moore et al. <sup>62</sup> ; Morland et al. <sup>52</sup> ; Morland et al. <sup>53</sup> ; Powell et al. <sup>63</sup> ; Sloane et al. <sup>54</sup> ; Small and McDermott <sup>65</sup> ; Zenk et al. <sup>66</sup>
Price	Block and Kouba <sup>57</sup> ; Graddy <sup>47</sup> ; Sloane et al. <sup>64</sup>
Marketing variable <sup>a</sup>	
TV advertising or programs: adults	Henderson and Baldasty <sup>51</sup> ; Henderson and Kelly <sup>60</sup> ; Tiroidkar and Jain <sup>55</sup>
TV advertising or programs: children	Bang and Reece <sup>49</sup> ; Harrison <sup>59</sup>
Magazine advertisements or articles	Duerksen et al. <sup>58</sup> ; Pratt and Pratt <sup>48</sup>
Location of all types of retail food outlets	Baker et al. <sup>56</sup> ; Block and Kouba <sup>57</sup> ; Block et al. <sup>50</sup> ; Lewis et al. <sup>61</sup> ; Moore et al. <sup>62</sup> ; Morland et al. <sup>52</sup> ; Morland et al. <sup>53</sup> ; Powell et al. <sup>63</sup> ; 62; Small and McDermott <sup>65</sup> ; Zenk et al. <sup>66</sup>
Food store characteristics	Block and Kouba <sup>57</sup> ; Sloane et al. <sup>64</sup>
Restaurant characteristics	Lewis et al. <sup>61</sup>

<sup>a</sup>Some studies addressed more than 1 aspect of marketing.

Fifteen studies were rated medium quality, and 5 were rated high quality. Of the high-quality studies, 3 analyzed promotional activities<sup>48,55,58</sup> and 2 assessed food outlet distribution.<sup>63,65</sup> The 5 studies that were rated high all had national coverage (e.g., nationwide magazines, television programs, or all US zip codes), provided specific statistics to support the description of the study population and ethnic targeting (e.g., audience demographics, media ratings, or detailed neighborhood composition information), included reliability information for the marketing

measures, and discussed their results at a high level of detail (e.g., specific types of foods and beverages). Studies rated medium were lower on 2 or more of these criteria, with no specific pattern. None of the studies were rated as low quality.

Highlights of the 20 studies are presented in Tables 2 through 4. The overall evidence base is consistent with the hypothesis that, compared with the general population, African Americans experience a relatively less favorable food-marketing environment with respect to the potential for prevention and

control of obesity and other diet-related chronic conditions. None of the articles specifically focused on the customization of products for African Americans relative to other groups. However, product characteristics are embedded in analyses of each of the other marketing mix elements (i.e., promotion, place, and price).

### Promotion

Evidence regarding promotions included 6 content analyses of television advertisements, 2 of print advertisements, and 1 assessment of onsite promotional prompts as part of a community market inventory (Table 3). Two other identified and relevant articles were excluded here: (1) Pratt and Pratt<sup>67</sup> because the data were included in Pratt,<sup>48</sup> a paper that is included in this review; and (2) Mastin and Campo<sup>68</sup> because this study only sampled from African American media and thus did not examine relative differences. The findings of these articles were consistent with the general themes reported here.

Tiroidkar and Jain<sup>55</sup> and Henderson and Kelly<sup>60</sup> compared food portrayals during popular African American television shows with those during shows for general audiences. Both studies found that more food advertisements were aired during African American programs than during general-market programs and that significantly higher-calorie, low-nutrition foods were advertised to African Americans. Two content analyses, one of prime time television programming<sup>51</sup> and one of children's advertisements,<sup>49</sup> reported that African Americans appeared more often in advertisements related to food than for other types of products and especially in advertisements for low-cost, low-nutrition foods and beverages. A third such study, which also focused on programming popular with children, found that food advertisements with African American characters were more likely to promote convenience and fast foods and less likely to depict eating as an adult-supervised activity.<sup>59</sup> The 2 content analyses of magazine advertisements<sup>48,58</sup> found that food promotions in African American-oriented magazines were dominated by low-cost, low-nutrition, energy-dense foods and that positive nutrition and weight loss messages such as "lite" or lean claims were less frequent in



**TABLE 2—Summary of Published Studies (N=20) Related to the Distribution of Foods and Beverages to African Americans: 1992–2006**

Citation, Study Objective, Setting, and Time Period	Objective and Method	Key Findings
Baker et al. <sup>56</sup> ; place (retail food outlets); St Louis, MO; 2003–2004	To determine whether people living in neighborhoods with different ethnicity and income characteristics differ in access to foods consistent with foods recommended in the US Dietary Guidelines. Spatial analysis on the basis of GIS mapping and market inventory of 81 supermarkets and menu audits of 26 fast-food restaurant chains to assess food outlet location and availability of healthier foods within outlets, in census tracts characterized as primarily African American (N = 60), mixed (N = 68), or primarily White (N = 92).	Individuals living in primarily African American areas (regardless of income) and mixed or White high-poverty areas were less likely than were individuals in primarily White, higher-income communities to have access to food outlets with a high availability of fruits, vegetables, and low-fat options. When outlets were ranked according to scores on availability of more-healthy food items, none of the 26 supermarkets with scores in the highest tertile were in primarily African American census tracts regardless of income level; 22 were in primarily White areas. 120 of the 355 fast-food restaurants were in the highest tertile for availability of more-healthy foods, of which only 4 were in primarily African American census tracts, compared with 63 in primarily White areas, and 53 in racially mixed areas.
Block and Kouba <sup>57</sup> ; place, price (retail food outlets, food prices); Chicago, IL; February and March 2003	To characterize the types of food stores accessible to residents of a primarily African American neighborhood compared with a neighboring, mixed-race suburban community. A market basket study of 10 types of stores (n = 134) across the 2 communities was conducted to analyze item availability, cost of the market basket, and quality of available produce.	Food item availability and produce quality varied significantly between store types. The African American community had many grocery stores and few supermarkets. The grocery stores carried competitively priced produce, but the quality was often unacceptable. Supermarkets had the best selection, and prices were lowest at discount supermarkets. Prices of packaged items were higher at independent stores than at chain supermarkets, but fresh items were cheaper.
Block et al. <sup>50</sup> ; place (retail food outlets); New Orleans, LA; August through October 2001	To assess whether African American and low-income neighborhoods have higher geographic exposure to fast-food restaurants compared with other neighborhoods. Regression analysis on the basis of GIS mapping of all fast food outlets within the city limits by percentage of African American residents and median household income includes analyses of census tracts identified as urban and residential and adjacent “shopping areas.”	Neighborhoods with 80% or more African American residents have 1 additional fast-food restaurant per square mile compared with neighborhoods with 80% or more White residents. There were 6 more fast food restaurants in an average-sized shopping area for the predominantly African American vs predominantly White neighborhoods.
Lewis et al. <sup>61</sup> (also Sloan et al. <sup>54</sup> and Sloane et al. <sup>64</sup> ); promotion, place (restaurant characteristics, retail food outlets); Los Angeles, CA; 2002–2004	To examine the availability and promotion of more-healthy or less-healthy food options and the greater or fewer number of those options at restaurants in less affluent and more affluent neighborhoods; to examine the availability and promotion of greater or fewer numbers of those options. Community-based market inventory of 659 restaurants within each of 3 categories: fast food, fast casual, and sit-down dining. A target area with 14% to 87% African American residents and moderate to low incomes (348 restaurants surveyed by community residents) was compared with a higher income area with an average of 8% African Americans (311 restaurants; surveyed by graduate students).	Compared with restaurants in more affluent areas with fewer African Americans, restaurants in less affluent neighborhoods with more African American residents were (1) less likely to be full service (27% in African American communities vs 58% in comparison area) (2) less likely to offer healthier options (e.g., broiled vs fried) (3) more likely to promote specific items, but less likely to label and promote healthy items (4) less likely to receive high marks on cleanliness, customer service, accessible parking, ease of access to public transportation, and safety and security
Moore and Diez Roux <sup>62</sup> ; place (retail food outlets); North Carolina, Maryland, and New York; November 2003	To investigate associations between the local food environment and neighborhood racial/ethnic and socioeconomic composition in communities involved in the Multi-Ethnic Study of Atherosclerosis (MESA).	Racial/ethnic composition of neighborhoods was associated with the distribution of store types in all 3 areas. Areas that were predominantly African American and racially mixed had store-to-population ratios (SR) compared with White areas

*Continued*

TABLE 2—Continued

	Statistical analysis of data by location of 3337 food and liquor establishments according to income and racial/ethnic composition in neighborhoods characterized as predominately African American, White, Hispanic, or Mixed in selected census tracts.	of 0.5 and 0.7, respectively, for supermarkets (i.e., half as many supermarkets in predominantly African American areas) and more than twice as many grocery stores as predominantly White neighborhoods (SR = 2.7 for predominantly African American areas; SR = 2.2 for mixed areas). Fruit and vegetable markets, bakeries, specialty stores, and natural food stores were less common and liquor stores more common in poorer and predominantly African American areas.
Morland et al. <sup>52</sup> ; place (retail food outlets); Mississippi, Maryland, Minnesota, and North Carolina; 1993–1995 (dietary data) and 1999 (food store data)	To examine the association between the local food environment and residents' reports of recommended dietary intake in neighborhoods among participants in the Atherosclerosis Risk in Communities (ARIC) study. Regression analysis on the basis of GIS mapping of places to buy food in neighborhoods in which African American (2393) and White (8231) study participants resided by census tract or zip code analyzed in association with individual-level data on usual dietary intake.	Supermarkets were 5 times as likely to be present in census tracts in which White participants lived. Only 8% of African American participants lived in an area in which there was at least 1 supermarket. More African American than White Americans reported diets that met recommendations for fruits, vegetable, and saturated fat consumption. For African American Americans, the likelihood of meeting these recommendations was proportional to the number of supermarkets present in the census tract of residence, even after adjustment for income and education and for the presence of other types of food stores. These effects were not apparent among White Americans.
Morland K et al. <sup>5</sup> ; place (retail food outlets); Mississippi, Maryland, Minnesota, and North Carolina; time frame not stated	To examine the distribution of food stores and food service places by neighborhood wealth and racial segregation in communities involved in the Atherosclerosis Study in Communities (ARIC). Regression analysis on the basis of GIS mapping of places to buy food in Mississippi, North Carolina, Maryland, and Minnesota by census tracts using the percentage of African American residents and home values as a proxy for relative wealth.	Neighborhoods with 80% or more White residents were 4 times as likely to have supermarkets compared with neighborhoods with 80% or more African American residents. Residents in African American neighborhoods also had less access to private transportation that might enable shopping outside of the immediate community of residence. All types of food service establishments (full service, fast food, and carryout places serving specialty items) were more common in predominantly White (80% or more) or racially mixed (20% to 80% White) neighborhoods compared with predominantly African American (80% or more) neighborhoods.
Powell et al. <sup>63</sup> ; place (retail food outlets); US national data; 2000	To assess the availability of food store outlets in the United States in association with race, ethnicity, and socioeconomic status of neighborhoods. Regression analysis of commercial food store outlet locations linked to census data to examine associations between the availability of different food store types and the income and racial/ethnic composition of the zip code.	The availability of chain supermarkets in neighborhoods with higher proportions of African Americans is only 52% of that in White neighborhoods after controlling for income and other covariates. African American neighborhoods were more likely to have grocery stores and nonchain supermarkets compared with White neighborhoods.
Sloane et al. <sup>54</sup> (also Lewis et al. <sup>61</sup> and Sloane et al. <sup>64</sup> ); place (retail food outlets); Los Angeles, CA; summer 2001	To study the food environments of an urban area using a community-based participatory research model, comparing African American neighborhoods vs other neighborhoods. Community-based market inventory comparing location and services of food distribution outlets in 331 stores in neighborhoods with an average of 47% African Americans and a contrast area with an average of 8% African American residents.	Target areas had relatively fewer supermarkets (5% vs 29% of stores) and chain stores (18% vs 46% of stores) than did the contrast area. Compared with the contrast area, stores in the target area were less likely to be rated "very clean" or to have "excellent" service and had lower availability of fruits, vegetables, nonfat milk and low-fat snacks, and meat. A more detailed substudy also indicated that stores in the target areas were less likely to sell fresh fruits and vegetables and whole-grain products.

Continued

TABLE 2—Continued

Small and McDermott 2006 <sup>65</sup> ; place (retail food outlets); US national data; 2000	<p>To examine whether basic resources such as grocery stores, hardware stores, pharmacies, laundries, and child care centers are scarce in poor and racially segregated urban neighborhoods.</p> <p>Regression analyses on the basis of GIS mapping of data from several sections of the US Census including a tabulation of every establishment by zip code, for every metropolitan area in the United States. A priori hypotheses were tested to compare neighborhoods that varied on the proportion of residents who are African American.</p>	<p>On average, as the proportion of African American residents increased, the number of establishments—including grocery stores, convenience stores, and restaurants—decreased. The number of establishments, particularly small establishments, increased somewhat at a higher poverty rate. However, a significant interaction between the proportion poor and the proportion African American for the number of convenience stores and restaurants suggested that high-poverty neighborhoods with high proportions of African Americans are less likely to have these resources.</p>
Zenk et al. <sup>66</sup> ; place (retail food outlets); 869 census tracts with varying proportions of African American residents and varying median incomes	<p>To evaluate the spatial accessibility of large chain supermarkets in relation to neighborhood racial composition and poverty.</p> <p>Spatial analysis on the basis of GIS mapping of supermarket locations to estimate travel distance from each of 869 census tracts with varying proportions of African American residents and varying median incomes.</p>	<p>The percentage of African American residents had no significant effect on accessibility of supermarkets in the least impoverished neighborhoods. However, in the most impoverished neighborhoods, distance to the nearest supermarket was more than a mile further in neighborhoods with medium or high proportions of African Americans residents.</p>

Note. GIS = geographic information systems. All highlighted findings were reported as statistically significant at  $P < .05$  in the source article. "Supermarkets" refer to large, corporate-owned stores, and "grocery stores" refer to small, independent food stores.

these magazines. Lewis et al.,<sup>61</sup> using community inventory data on retail food outlets in Los Angeles, California, found that promotions to encourage consumption of particular types of food were more numerous and less likely to promote healthful items in areas with a high proportion of African Americans compared with the predominantly White areas and higher-income areas.

### Place

Eleven studies considered the availability of retail food outlets (e.g., supermarkets or fast-food restaurants), the presence of specific food products, or the specific characteristics (e.g., quality) of the outlets and products (Table 2). Most studies used geographic information systems approaches to examine the distribution of food stores and food-service places in relation to racial segregation or density. Ethnic composition of neighborhoods was often examined in conjunction with socioeconomic status. Few studies clearly separated exposure based on race relative to income.

An analysis by Morland et al. in conjunction with the Atherosclerosis Risk in Communities Study found that there were 4 times more supermarkets located in White neighborhoods than in African American neighborhoods.<sup>53</sup> In a related study, the authors found that there were fewer grocery stores (i.e.,

small, nonchain stores), but 5 times more supermarkets (i.e., large, chain stores), and more full-service restaurants located in White neighborhoods.<sup>52</sup> These authors also linked the availability of supermarkets to better dietary quality among African American, but not White, participants in the Atherosclerosis Risk in Communities Study. Studies in Los Angeles; Detroit, Michigan; and St. Louis, Missouri, and in national data also reported less access to supermarkets or chain supermarkets in communities with higher proportions of African American residents compared with predominantly White areas.<sup>54,56,65,66</sup> An analysis across selected census tracts in 3 states showed fewer supermarkets, more grocery stores, and fewer specialty or natural food stores in African American neighborhoods than in White neighborhoods.<sup>62</sup> Restaurant access also differed in the African American and White communities in Los Angeles. The predominantly White communities had a great number of, and a greater variety of, restaurants. Block et al. reported greater access to fast-food restaurants in predominantly African American neighborhoods in New Orleans, Louisiana.<sup>50</sup>

Three studies in Chicago, Illinois, and Los Angeles<sup>54,57,61</sup> examined characteristics of retail food outlets with respect to store conditions and product availability.

Produce quality, variety of produce, and availability of healthful food items were lower in areas with a high proportion of African American residents versus predominantly White areas. Produce quality varied by store type and was lower in the typical grocery stores in African American communities.<sup>57</sup> Stores in African American areas were also less likely to be rated "very clean" or to have "excellent" service.<sup>54</sup> Inventories of restaurants gave a similar impression; restaurants in areas with more African American residents were less likely to be full service, to offer healthier food and beverage options, and to have clean, convenient and secure facilities.<sup>61</sup> The Sloane et al. article<sup>64</sup> also contains data on perceived access and store quality, but these data are not included in this discussion because they are based on individual consumer perceptions rather than objective indices of marketing exposure.

### Price

Cost is among the most significant predictors of dietary choices, especially among those with limited incomes.<sup>69,70</sup> However, we identified only 3 articles focused on the price-related aspects of food marketing to African Americans (Table 4). Graddy<sup>47</sup> identified price differences according to area, race, and

**TABLE 3—Summary of Published Studies (N=20) Related to the Promotion of Foods and Beverages to African Americans: 1992–2006**

Citation, Study Objective, Setting, and Time Period	Objective and Method	Key Findings
Bang and Reece <sup>49</sup> ; promotion (television advertisements); ABC, CBS, FOX, UPN and Nickelodeon; February and March 1997	To examine portrayals of African Americans, Hispanics, and Asian Americans in advertisements run during general-audience children's television programming on national networks, including associations of race/ethnicity with product type. Content analysis of 813 television advertisements that showed human actors, shown during cartoons or other children's programming on national networks.	African American actors were more likely to be shown in food advertisements (61.1%) than in toy advertisements (17.6%). Comparable percentages for White actors were 46.2% in food advertisements and 33.2% in toy advertisements.
Duerksen et al. <sup>58</sup> ; promotion (magazine advertisements); four highest-circulating general interest magazines oriented to African American, Hispanic, and mainstream (predominantly White) women; published in June, July, and August 2002	To evaluate variations in health-related advertisements and health promotion cues in magazines catering to Hispanic, African American, and White women. Content analysis of all health-related advertising in 12 women's magazines.	Health-promoting advertisements were generally less common, and health-diminishing advertisements were more common in the African American and Hispanic magazines compared with mainstream magazines. Promotions for unhealthful food and drink (not counting alcohol) composed 32% of all ads in African American magazines and 29% of all ads in mainstream magazines. African American magazines were more likely than were the mainstream magazines to advertise alcohol and fast food. 55% of advertisements for unhealthful products in African American magazines used models (African American), whereas only 6% of the advertisements in mainstream magazines used models (White). Mainstream magazines used White models in health-promoting advertisements (58% of such advertisements; this finding is not specific to food and beverage advertisements).
Harrison <sup>59</sup> ; promotion (television advertisements); northcentral Illinois; 5-week period in Spring 2003	To describe attributes of characters and foods in food advertisements in general-audience television programming popular with children. Content analysis of 380 food advertisements with human characters in 40 hours of television programming, comparing advertisements featuring at least 1 African American character (n = 147) with those with no African American characters (n = 233). Advertisements were characterized and analyzed for the compliance of their nutritional content with the federal government's recommended daily values (RDVs) of selected nutrients.	Advertisements with African American characters were more likely than were advertisements without African American characters to feature convenience foods, more likely to be sponsored by fast-food companies, and more likely to promote foods eaten for lunch rather than breakfast. Advertisements with no African American characters were more likely to feature bread or cereals and candies, sweets, or soft drinks and foods higher in sugar. Advertisements with African American characters were less likely to include adults and more likely to include overweight characters. Eating behavior and body size were correlated in the advertisements with African American characters but not in advertisements without African American characters. Most advertisements depicted snacking rather than meals, and the nutritional values of foods advertised was not in line with dietary recommendations.
Henderson and Baldasty <sup>51</sup> ; promotion (television advertisements); ABC, CBS, NBC, Fox, UPN, and WB; spring 1999 season	To note the amount and type of representation of people of color in prime-time television advertisements, including associations of race/ethnicity with product type. Content analysis of 825 advertisements on general market and African American-oriented television programming from 2 episodes each of 31 national prime-time television shows (top 10 situation comedies, top 5 dramas, and 11 African American-oriented programs).	Advertisements with people of color <sup>a</sup> had substantial representation related to 4 product categories: soft drinks, candy and gum, fast food, athletic shoes and clothing, and clothes. For example, people of color had primary roles in 42.8% of 112 fast food product advertisements analyzed. Whites dominated in advertisements for other product categories, including non-fast food, household products, and cars.

Continued



TABLE 3—Continued

Henderson and Kelly <sup>60</sup> ; promotion (television advertisements); NBC, ABC, CBS, Fox, and UPN; September and October 2003	<p>To document the types of foods and weight-related nutritional claims in advertisements on general market and African American television programming.</p> <p>Content analysis of 553 advertisements during 101.5 television advertising hours on general market (302 advertisements; 69.5 hours) and African American-oriented (251 advertisements; 32 hours) television programming on 5 national networks.</p>	<p>Advertisements for fast food that featured people of color were almost always tied to a product promotion at the franchise, highlighting inexpensive food and opportunities for contests or free merchandise.</p> <p>In food-related advertisements, Whites were shown preparing foods or having home-prepared meals, whereas people of color were usually shown consuming fast food or convenience food.</p> <p>The percentage of food advertisements on African American vs general market programs was higher (24% vs 14.9% of advertisements, respectively); mean number of food advertisements per 30 minutes of programming was 3.97 vs 2.42, respectively, in the two markets.</p> <p>Fast food promotions were more common in the African American vs general market (54% vs 32% of advertisements, respectively), and promotion of sit-down restaurants less common (8.4% vs 18.9%, respectively).</p> <p>Packaged-food advertisements on African American shows were more likely to be for candy, soda, meat, and eggs compared with more advertisements for breads, cereals, grains, pasta, fruits and vegetables, desserts, or alcohol in the general market programming.</p>
Lewis et al. <sup>61</sup> (also Sloan et al. <sup>54</sup> and Sloane et al. <sup>64</sup> ); promotion (in-store) and place (restaurant characteristics, retail food outlets); Los Angeles, CA; 2002–2004	<p>To examine the availability and promotion of more-healthy or less-healthy food options and the greater or fewer number of those options at restaurants in less affluent and more affluent neighborhoods; to examine the availability and promotion of greater or fewer numbers of those options.</p> <p>Community-based market inventory of 659 restaurants within each of 3 categories: fast food, fast casual, and sit-down dining. A target area with 14% to 87% African American residents and moderate to low incomes (348 restaurants surveyed by community residents) was compared with a higher income area with an average of 8% African Americans (311 restaurants; surveyed by graduate students).</p>	<p>Compared with restaurants in more affluent areas with fewer African Americans, restaurants in less affluent neighborhoods with more African American residents were:</p> <ol style="list-style-type: none"> <li>(1) less likely to be full service (27% in African American communities vs 58% in comparison area)</li> <li>(2) less likely to offer healthier options (e.g., broiled vs fried)</li> <li>(3) more likely to promote specific items, but less likely to label and promote healthy items</li> <li>(4) less likely to receive high marks on cleanliness, customer service, accessible parking, ease of access to public transportation, and safety and security</li> </ol>
Pratt and Pratt <sup>48</sup> ; promotion (magazine advertisements); <i>Ebony</i> and <i>Essence</i> (African Americans) and <i>Ladies' Home Journal</i> (general market); 1980–1982 and 1990–1992	<p>To compare the food advertisements and health-promotional messages in 3 consumer magazines that target African Americans or the general market, and examine changes over time.</p> <p>Content analysis of 3319 advertisements in magazines with a high percentage of female readers in either African American or general market readers.</p>	<p>A high proportion of food and beverage advertisements in <i>Ebony</i> and <i>Essence</i>, (62% and 47%, respectively) were for alcoholic beverages, compared with less than 2% of the <i>Ladies' Home Journal</i> advertisements. Advertisements for nonalcoholic beverages increased over time, less so in <i>Ladies' Home Journal</i>, whereas advertisements for alcoholic beverages decreased. Nonalcoholic beverages were 17% and 24% of advertisements in <i>Ebony</i> and <i>Essence</i> in 1990 through 1992, respectively, compared with about 7% in <i>Ladies' Home Journal</i>.</p> <p><i>Ebony</i> and <i>Essence</i> carried almost no advertisements (0% to 3% in any category) for vegetables, fruit, and milk and dairy products, compared with 7% to 12% of <i>Ladies' Home Journal</i> advertisements in these categories averaged for both time periods. The proportion of advertisements for milk and dairy, and fruits and vegetables increased with time in <i>Ladies' Home Journal</i> but decreased or did not change in <i>Ebony</i> and <i>Essence</i>.</p>

Continued

**TABLE 3—Continued**

Tirodkar and Jain <sup>55</sup> ; promotion (television advertisements); WB, UPN, and NBC; fall 1999, first season	To compare portrayals of food during popular African American television shows with those during general programming. Content analysis of verbal and visual references to foods or beverages in television programming and advertisements aired during the 4 most-watched situation comedy television shows in the general market and 4 top shows in the African American market.	The number and type of references to food or beverages per show was similar in the 2 markets. African American-oriented shows aired more food commercials than did those in the general market (4.8 vs 2.9 per 30 minutes, respectively). African American vs general market advertisements put a greater emphasis on soft drinks (13% vs 2%), candy (30% vs 14%), and other desserts (6% vs 0%), and less emphasis on bread and grains (6% vs 12%) as well as alcohol (0% vs 18%).
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Note. GIS = geographic information systems. All highlighted findings were reported as statistically significant at  $P < .05$  in the source article.

<sup>a</sup>The article notes that minority groups other than African Americans represented about 1%, and the article makes most specific reference to African Americans vs other ethnic groups in the discussion of findings.<sup>50</sup>

**TABLE 4—Summary of Published Studies (N=20) Related to the Prices of Foods and Beverages Marketed to African Americans: 1992–2006**

Citation, Study Objective, Setting, and Time Period	Objective and Method	Key Findings
Block and Kouba <sup>57</sup> ; place and price (retail food outlets); Chicago, IL; February and March 2003	To characterize the types of food stores accessible to residents of a primarily African American neighborhood compared with a neighboring, mixed-race suburban community. A market basket study of 10 types of stores (n = 134) across the 2 communities was conducted to analyze item availability, cost of the market basket, and quality of available produce.	Food-item availability and produce quality varied significantly between store types. The African American community had many grocery stores and few supermarkets. The grocery stores carried competitively priced produce, but the quality was often unacceptable. Supermarkets had the best selection, and prices were lowest at discount supermarkets. Prices of packaged items were higher at independent stores than at chain supermarkets, but fresh items were cheaper.
Graddy <sup>47</sup> ; price (fast food outlets); Burger King, Roy Rogers, KFC, and Wendy's; New Jersey and eastern Pennsylvania; February and March 1992 and November 1992	To assess differences in prices charged by fast-food restaurants that serve neighborhoods with differing proportions of African American residents or poor residents. Statistical analysis of survey data on prices charged by over 400 major fast food chain restaurants in zip code areas with different proportions of African Americans and different income characteristics.	Prices for fast food chains were approximately 5% higher for each 50% increase in the size of the African American population in the service area, even after controlling for differences in cost and competition. Fast food restaurants were disproportionately located in African American and lower income neighborhoods.
Sloane et al. <sup>64</sup> (also Sloan et al. <sup>54</sup> ); price (retail food outlets); Los Angeles, CA; summer 2001	To study the nutritional environment of an urban area using a community-based participatory research model. Community based market inventory comparing location and services of food distribution outlets and restaurants in neighborhoods with an average of 47% African Americans and a contrast area with an average of 8% African American residents, focusing on measures of food prices in markets and restaurants.	The analysis of product prices found that both the lowest and highest prices for key items were in the target neighborhoods. However, with regard to restaurant prices, the prices at target area restaurants were generally lower than those in the comparison area.

Note. KFC = Kentucky Fried Chicken. "Supermarkets" refer to large, corporate owned stores, and "grocery stores" refer to small, independent food stores.

income characteristics, with African Americans more likely to experience higher prices. More-recent studies by Block and Kouba<sup>57</sup> and Sloane et al.<sup>64</sup> suggest that reasons for price differentials may be complex. For example, food prices vary significantly by type of retail food outlet within and across areas. In

the Sloane et al. study in Los Angeles,<sup>64</sup> both the lowest and highest prices for several basic food items were found in the area with more African Americans. Restaurant prices were lower and less variable in the target area.<sup>2</sup> Block and Kouba reported that the price of a market basket (a list of foods derived from

the US Department of Agriculture meal plans and recipes for low-income households) was less in the predominantly African American area relative to the predominantly White area. Some food products (e.g., produce and meat) were less expensive in the nonchain grocery and supermarkets typical in the African

American area, whereas most packaged items at these stores were more expensive.<sup>57</sup> None of these studies addressed “relative prices,” that is, cost within the context of the available funds for food and other necessities.<sup>71</sup>

## DISCUSSION

### General Findings

The identification of only 20 articles indicates that the available evidence on the specific issue of targeted marketing to African Americans relative to the general or majority population is still very limited. Only 5 were judged to be of high quality. The recent growth of literature regarding target marketing to African Americans relative to the general population underscores the need for additional research on how to improve this type of evidence. Findings used to inform policy changes will attract close scrutiny.

Taken together, the results suggest that the marketing environments of African American consumers are less likely to support the development and maintenance of healthful eating and, moreover, that these environments may predispose African Americans to excess caloric consumption and relatively poor dietary quality. The content analyses of promotion were remarkably consistent in demonstrating that advertisements for low-cost, high-calorie, and low-nutrition food and beverage products are more frequent in media targeted to African Americans. The 11 studies of food purchase locations all suggested that African American consumers tend to have access to fewer supermarkets and more fast-food outlets than their White counterparts, an impression strengthened by the heterogeneity of locales and conceptualizations in these studies. Paucity of supermarkets may limit the variety of low-cost and healthier products available for purchase. Distribution issues are closely coupled with price issues. For example, results of a market basket survey show that the introduction of a large national chain store made a big difference in keeping prices down in low-income neighborhoods.<sup>72</sup>

Qualitatively, as noted previously, African Americans may respond more favorably to ethnically targeted marketing than White consumers. Quantitatively, there may be greater exposure to both targeted and nontargeted

marketing because of African Americans' higher use of media, especially television.<sup>40,41</sup> The ability to avoid unhealthful messages in the marketing environment may be limited. The experience of constraints based on place and price is presumably greatest in populations with limited mobility,<sup>73</sup> limited work flexibility,<sup>74</sup> and limited incomes<sup>70</sup>—all of which affect African Americans disproportionately. One of the studies in our sample noted the relatively greater lack of private transportation in African American communities.<sup>53</sup> Price issues are complex in relation to the low-income segment of the African American population, because the need to use available funds for food and other necessities is greater at the low end of the income continuum<sup>71</sup> and because the stores that are accessible might not have the lowest prices even within a given neighborhood. The experience of these constraints is not only physical but may also be embedded in social norms and expectations.<sup>69,75,76</sup>

These and other contextual differences may limit the effectiveness of general health promotion and disease promotion initiatives in improving the diet-related disease profiles of ethnic minorities.<sup>20,77</sup> An abundance of marketing for less-healthy foods may serve as a barrier to health promotion efforts and to the effectiveness of corporate promotion of healthier food items. For example, although government agencies recently recommended that food companies tailor their public education programs and market more nutritious, lower-calorie foods to specific racial and ethnic minority populations,<sup>78</sup> limited mention was made of the environmental barriers these efforts may encounter. Information-based policy interventions designed to encourage healthy eating are less likely to succeed when access to healthy food is limited.<sup>1</sup> From this perspective, focusing on solutions based on individual consumer behavior may be insufficient, because individual behavior is influenced by the context in which the behavior is enacted.<sup>75</sup>

### Research Implications

Our examination of marketing as a contextual influence on obesity and other health-related outcomes highlights multiple ways in which the level and type of marketing

exposure may vary among specific consumer segments. The influence of marketing on health, food-related attitudes, and beliefs and behaviors varies among specific population subgroups. Researchers need more knowledge about the marketing environments of specific populations, particularly high-risk populations.<sup>20,76</sup> Research on promotions other than television advertising is needed, particularly in channels where concentrated targeting may be likely (e.g., food promotions on billboards or other local media in African American neighborhoods relative to other neighborhoods or, given that African Americans see more movies than the general population, product placement in movies).<sup>79</sup> More studies are needed to evaluate the actual content of advertisements and of what those messages communicate about what constitutes normal, healthful dietary patterns. Community inventories to assess promotions and food availability onsite in retail stores and restaurants should be replicated in additional communities and types of food outlets.

Future research should specifically address potential deficiencies in the current evidence base. Sampling procedures, small numbers, and varied geographic locales may limit the generalities that can be drawn. For example, some content analyses examine only select targeted magazines, and some of the distribution studies focus on limited geographic locations. Research with nationally representative samples will provide a better understanding of the role of marketing as a contextual influence on African Americans overall. At the local level, studies that capture multiple marketing strategies and tactics (e.g., promotions, prices, and distribution of products) in a particular area can guide the design of interventions.

Understanding the heterogeneity within target markets such as African American consumers, especially with regard to the interrelationships of education, race, gender, residence, income, and age will also be critical. For example, some studies examined neighborhood socioeconomic status, but the interaction of these variables with neighborhood racial composition was seldom explicitly considered. Given that media audiences and African American neighborhoods vary by income, it is likely that the marketing environment of African Americans varies by

socioeconomic status. For example, research has found that urban dwellers pay 3% to 37% more for groceries in their local community compared with suburban counterparts.<sup>72</sup>

Finally, taking a business perspective on this research is also essential (i.e., taking into account the socially and legally sanctioned profit maximization goals of food marketers). For example, the content analyses do not consider the political economy of media and advertising. Targeting African American consumers through advertising involves not only a desire to reach these consumers, but also a strategic imperative to do so in a profitable manner. A Federal Communications Commission study indicated that radio stations that targeted programming to minority listeners are unable to earn as much revenue per listener as stations that air general-market programming.<sup>80</sup> This study also suggests that minority-owned radio stations earn less revenue per listener than majority broadcasters that own a comparable number of stations nationwide. Understanding the relationship between target marketing and the profitability of various targeted marketing activities may add additional insight.

### Limitations

In addition to the above-mentioned limitations of available evidence, the inferences to be drawn from this study are affected by the scope of our review as well as the specific restrictions placed on our search strategy. The scope was limited to the association between marketing exposure and African American race/ethnicity and, therefore, does not shed light on the ultimate question of effects of marketing exposure on food purchasing and consumption practices of African Americans. Such research is needed, particularly studies employing longitudinal designs. Experimental studies that manipulate promotional activity and measure behavioral response may also help to establish causality.

We restricted our search to published articles in scholarly journals, and did not search for other published or unpublished sources that might have contained relevant data. Direct communications with authors of some articles that were excluded might have yielded additional data specific to African Americans (e.g., where published comparisons were by

income but not specific to race/ethnicity). Accessing only English-language publications was probably not a limitation given that our focus was on marketing to African Americans. Given that we could find no specific precedent, our quality-rating scheme was developed specifically for this study and has not been validated. However, key quality criteria were first applied at the level of the search strategy, so that all included studies addressed the question of interest at some level. In addition, although study quality varied, no included studies were judged to be of low quality, and the findings of disproportionate exposure of African Americans to food marketing or marketing of less-healthy foods was characteristic of all studies identified.

We cannot rule out a selection bias leading to a lesser likelihood of publication of studies that found no evidence of potentially adverse targeted food and beverage marketing. However, we think that such findings from well-designed studies, which would be contrary to expectation based on the pattern of published results to date and therefore of scientific and policy interest, would likely receive attention from journal editors.

### Conclusions

Our review of published studies indicates the types of food and beverage marketing strategies to which African American consumers are exposed differentially. The findings are consistent in indicating adverse marketing environments with respect to obesity prevention and healthful eating in general. Although food marketing is only one source of influence on food consumption, it is clearly an important and influential source.<sup>10</sup> Efforts to close the “ethnicity gap” (i.e., the differences between ethnic groups) in obesity prevalence may fail unless the targeted marketing of energy-dense, low-nutrition foods to ethnic minorities can be counterbalanced by marketing of healthier foods. In other words, interventions by the public health community, food marketers, social marketers, and policy-makers designed to reduce food-related behaviors that contribute to obesity and chronic diseases in African Americans must include explicit attention to the promotion, distribution, and costs of food products.

Public health researchers and advocates are increasingly exploring the role of marketing strategies and tactics, and considering marketing from a marketer’s perspective and marketing framework will allow for an increased understanding of the processes by which marketing may encourage consumption of excess calories among specific target markets. Despite the excess risk in minority populations, racial/ethnic health disparities have not been central to policy discussions regarding corporate marketing practices and obesity<sup>78</sup> or other health disparities issues.<sup>81</sup>

Research of the type reviewed here provides a foundation for studies considering how consumers in these populations respond to their particular marketing environments, allowing for much more specificity than studies of responses to marketing in general. Understanding the marketing environments for specific consumer segments will identify gaps in the existing evidence base and illuminate how marketing efforts may serve as a counteracting force for prevention efforts or encourage healthier behaviors. Additional studies that apply this framework across health domains will help researchers understand and design policies and interventions related to marketing as a contextual influence on obesity and other health-related beliefs and behaviors. Such studies are of especially high priority for other ethnic minority populations that are at high risk for obesity and related diseases. ■

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*This paper was accepted on December 24, 2007.*

### Contributors

S.A. Grier led the study and conducted or supervised all aspects of its execution. S.K. Kumanyika assisted with data synthesis and interpretation. Both authors contributed to the conceptualization and design of the study and writing of the article.

### Acknowledgments

This work was supported the Robert Wood Johnson Foundation Health & Society Scholars Research and



Education Fund at the University of Pennsylvania (grant 045824). S.K. Kumanyika was supported in part by the National Institutes of Health through the National Center for Minority Health and Health Disparities (Penn–Cheyney EXPORT Center; grant P60 MD000209).

The authors wish to thank Temi Agbade, Victor Brobbey, and Haley Lofink for research assistance, the editors and the reviewers for their valuable insights, and the Scholars and Faculty of the Robert Wood Johnson Foundation Health and Society Scholars Program at the University of Pennsylvania for their helpful feedback on earlier versions of this article.

### Human Participant Protection

No protocol approval was needed for this study. This was a secondary review of published literature. No human participants were involved.

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